



The Tahoma News

July 1 – September 7, 2015



100 Years of the Wonderland Trail 1915 - 2015

By Paul Sadin, Historian at Historical Research Associates, Inc. and former seasonal interpretive ranger at Mount Rainier National Park

There is a trail that encircles the mountain. It is a trail that leads through primeval forests, close to the mighty glaciers, past waterfalls and dashing torrents, up over ridges, and down into canyons; it leads through a veritable wonderland of beauty and grandeur.

—Superintendent Roger Toll, 1920

Every summer thousands of backpackers travel to Mount Rainier National Park to hike the Wonderland Trail, seeking the same scenic splendors and thrilling adventures Superintendent Roger Toll described above. The 93-mile footpath encircling the mountain is one of the oldest and most popular recreational attractions within the park. This year marks the 100th anniversary of the trail's construction and also celebrates the first around-the-mountain Wonderland trip.

When Congress established Mount Rainier National Park in 1899, a dependable trail network



Riders and packhorses at Klapatchee Lake, traveling along the western leg of the Wonderland route. The original around-the-mountain trail traversed this western section of the park. NPS archival photo

was needed to protect the attractions and resources. Park rangers began building the trail system in 1907, and extended it farther each year. In the summer of 1915, trail crews finally completed the trail in early August. That original route was much longer (about 130 miles) and less scenic than today's path. The trail ran close to the park boundary, at a lower elevation than the one hikers travel today. But the lower route was free of snow much longer each year, enabling rangers to patrol the park—on foot or horseback—to search for fires and to prevent poaching and trespassing.

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Road Work Ahead

Construction work on the historic Nisqually Road between the Nisqually Entrance Arch and the Paradise area is scheduled to take place through the end of July 2015. Additional work is scheduled after October 1 and will continue into November, weather permitting.

This work continues the second year of a multi-year road construction project that will address outdated utilities and deteriorating road conditions due to abundant precipitation, structural and design deficiencies, large traffic volumes, and normal wear. The project is designed to protect the extraordinary natural and cultural resources within and adjacent to the road, including rare plants and animals, archaeological resources, and the character of the historic roads.

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Welcome...

... to Mount Rainier National Park!

One hundred years ago a Mountaineers group circumnavigated Mount Rainier, tracing the route that would become the superbly named 93-mile Wonderland Trail.

With 22,000' of elevation gain and loss, sometimes the wonder in hiking that trail is, "Can I make it?"



Superintendent Randy King

Next year, 2016, marks another centennial. With the passage of the National Park Service (NPS) Organic Act in 1916, Congress created an organizing principle and governing mission for our national parks founded on preservation and enjoyment. From the handful of early parks like Mount Rainier, the system has evolved to today's 407 parks—places that represent the nation's incredibly rich natural and cultural heritage, places to be cherished and enjoyed. That this legacy belongs to all of us is the half of its power and beauty.

The NPS Centennial calls us to reflect on this wonderful heritage of parks and public spaces, and challenges us to ensure their future. Towards that end, NPS and partners are striving to encourage all Americans to explore their parks and public lands, to find and connect with their special place or story. For from those personal connections will come the caretakers of today and tomorrow—the people who will visit, love, support, and advocate for our parks and public spaces, and in turn, ensure that coming generations will share this same joyful right.

We hope you've found your special place at Mount Rainier!

Randy King
Superintendent

Are You Ready To

FIND YOUR
PARK

We invite you to be a part of this incredible movement celebrating the centennial of the National Park Service in 2016! Where will you Find Your Park? Get the inside scoop and share your experience at <http://prks.org/1F9voQq>

Paradise Trail Construction

This summer the Nisqually Vista Trail at Paradise will undergo much needed repair. Closures of sections of the trail will mainly be in place weekdays. However, hiking the entire loop will not be possible. Every effort is being made to open the trail on weekends. Watch for the occasional vehicle transporting materials on area trails. Follow detour signs to avoid having to backtrack. *More information on page 4.*

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Discover Rainier: Off the Beaten Path

If you are in the park on a busy day, you may want to explore less-visited areas to escape the biggest crowds. In taking the extra time to seek out these special places, you can immerse yourself in an old growth forest, reflect next to a cascading waterfall, hike in virtual solitude, or just relax, take in the view, and reconnect with nature. No matter where you go in the park you will find spectacular scenery and a multitude of recreation opportunities.



Enjoy hiking among ancient trees and past numerous waterfalls on the Eastside Trail.

Interested in Old Growth Forests?

Visit Ohanapecosh via State Route 123 to explore lush old growth forests of Douglas fir and western red cedar. There is also a nature trail behind the visitor center that leads past hot springs and the site of an early resort. Explore the old growth forest west of Longmire on the short Twin Firs Trail. Start your hike at the interpretive exhibit on Nisqually to Paradise Road (State Route 706).

Did You Bring a Picnic?

At Ohanapecosh off State Route 123 stop at the picnic area adjacent to the campground. Visit the Box Canyon Picnic Area just west of Box Canyon itself. Be sure to stop at the latter for a look at the Cowlitz River, 180 feet below, as it cuts a deep slot into bedrock. From the Tipsoo Lake picnic area off State Route 410 you'll have a great view of the meadows surrounding the lake. Picnic at Mowich Lake via State Route 165 and admire the colorful subalpine wildflowers surrounding the deepest and largest lake in the park.



Take an easy hike to spectacular Silver Falls near Ohanapecosh Campground.

Wild for Waterfalls?

Then the east side of the park via State Routes 123 and 410 is the place to go. The powerful Silver Falls near Ohanapecosh is only a 0.3 mile hike from State Route 123 or you can take the 1.3 mile trail from Ohanapecosh Campground. For those who like to hike, take the East Side Trail to one or all of the many waterfalls dotting the route. Start from State Route 123—park at a small pullout 0.5 mile south of Deer Creek—or at the Grove of the Patriarchs on Stevens Canyon Road.

Is Geology Your Interest?

Then drive three miles to the end of Westside Road near the Nisqually Entrance to view the dramatic results of flooding and rockfall. You may even see a mountain goat gazing down at you from a cliff face high above! For great views of lava layers, glaciers, and a glacially carved canyon, stop at one



Watch for ancient andesite columns along Sunrise Road.

of the first pullouts on Ricksecker Point Road off Nisqually Road. Drive the Sunrise Road to view columnar andesite columns that formed when the toe of a lava flow cooled rapidly as it flowed against glacial ice.

Prefer Uncrowded Trails?

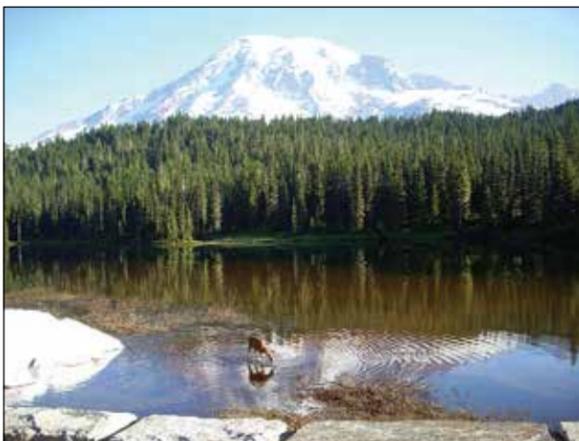
Many trails leave from the Reflection Lakes area on Stevens Canyon Road including the Lakes, High Lakes, Mazama Ridge, and the Wonderland trails, with the Snow and Bench Lakes Trail located in a pullout just down the road to the east. Another great area for trails is on the east side along State Routes 123 and 410. From south to north you will find Silver Falls, Three Lakes, East Side, Shriner Peak, and Crystal Lakes trails to name a few. Trails in the Mowich Lake area lead to subalpine lakes and amazing meadows.



Longmire's historic wooden suspension bridge.

Are You a History Buff?

If so, then Longmire on Nisqually Road is the place to visit. The Longmire Museum is the starting point for the Longmire Historic District Walking Tour. Take the self-guiding tour of the historic district to get a taste of early National Park Service rustic architecture. Follow the Trail of the Shadows to learn about the park's first homestead and resort.



Take in the unsurpassed view of the mountain from Reflection Lakes!

How about Subalpine Meadows and Lakes?

For an outstanding wildflower meadow experience highlighted by beautiful lakes, try Reflection Lakes off Stevens Canyon Road, Mowich Lake via State Route 165, or Chinook Pass and Tipsoo Lake on

State Route 410. In mid-summer the meadows should be bursting with color, providing a great backdrop for these tranquil lakes set in glacially carved basins.



A visit to Mowich Lake in the northwest corner of the park is worth the drive.

How Far Is It?

One Way Driving Times & Distances

| Road | Distance | Time |
|---|----------|---------|
| Longmire to Paradise | 12 miles | 25 min |
| Paradise to Ohanapecosh via Stevens Canyon Rd | 23 miles | 45 min |
| Ohanapecosh to White River Entrance | 18 miles | 30 min |
| White River Entrance to Sunrise | 13 miles | 45 min |
| White River Entrance to Carbon River via Enumclaw | 61 miles | 2 hrs |
| Longmire to Carbon River via Eatonville/Orting | 80 miles | 2.5 hrs |
| Longmire to Mowich Lake via Eatonville/Orting | 89 miles | 3 hrs |

Your Visitor Fees at Work

Mount Rainier became the fifth national park in 1899, and was the first to admit vehicles for a fee at the Nisqually Entrance in 1907. Eighty years later, the cost for a one week visit to the park was raised from \$2 to \$5 per vehicle. In 1996 the fee was increased to \$10, and by 2006 it reached \$15 where it remained until May of this year when it increased to \$20.

Your entrance and camping fees benefit the park tremendously. By law, eighty percent of these recreation fees are retained at the park, with twenty percent made available to national park units without fee programs. This funding is used exclusively on projects or services that directly benefit visitors. Visitor fees are the primary fund source for the new electrical and telecommunication utilities being installed in the Nisqually-Paradise Road. And every year, visitor fees are used to support trail, campground and picnic area repairs and improvements, restore subalpine meadows, upgrade aging interpretive exhibits, improve accessibility, reduce hazards, and provide information through fee rangers, social media, and publications like this one!

By paying entrance and camping fees you help care for the park. Watch for evidence of your fees at work during your visit and thank you for your support of Mount Rainier National Park!

Explore, Enjoy, and Stay Safe



Mount Rainier National Park was established in 1899 to preserve the natural and cultural resources in this area and to provide for public benefit and enjoyment. This information will help you learn more about the park, and protect yourself and the park.

Accessibility

Most restrooms, visitor centers, picnic areas, and designated campsites are accessible or accessible with help by wheelchair. Accessible lodging is available inside the park and in local communities. In the Jackson Visitor Center at Paradise, the audiovisual programs are captioned; assistive listening devices are available for the park film; an audio described tour of the exhibits is available; and the building and exhibits are accessible by wheelchair. The Kautz Creek Boardwalk Nature Trail is accessible in summer. An accessible trail leads to the base of the Paradise meadows and a portion of the trails at Paradise are accessible with help. Inquire at the Jackson Visitor Center for more information.

Your Entrance Fees at Work!

The *Tahoma News* is printed quarterly with Federal Lands Recreation Enhancement Act funding paid for by your entrance fees.

Bikes in the Park

Bicycle only on roads, not on trails. Mountain bikes are permitted on Westside Road and the Carbon River Road, but not on trails.

Mount Rainier National Park

Superintendent
Randy King



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Ashford, WA 98304

E-mail
MORAInfo@nps.gov

Park Headquarters
(360) 569-2211
(360) 569-2177 TDD

Lost and Found
(360) 569-6608

Park Websites
Mount Rainier National Park
www.nps.gov/mora
North Coast and Cascades Science & Learning Network
<http://nwparkscience.org/>

Official Park Social Media Sites
[facebook.com/MountRainierNPS](https://www.facebook.com/MountRainierNPS)
[flickr.com/MountRainierNPS](https://www.flickr.com/photos/MountRainierNPS/)
twitter.com/MountRainierNPS
[mountrainiernps.tumblr.com/](https://www.tumblr.com/mountrainiernps)
[youtube.com/MountRainierNPS](https://www.youtube.com/MountRainierNPS)



NOTICE: Marijuana is Illegal in Mount Rainier National Park

While limited recreational use of marijuana is legal in Washington State, possession of any amount of marijuana or other illegal drugs remains illegal in Mount Rainier National Park, surrounding national forests, and all federal lands.

Firearms

The use of firearms is prohibited within Mount Rainier National Park. Also, federal law prohibits firearms in certain facilities in this park; those places have signs at public entrances. People who can legally possess firearms under federal, Washington State, and local laws may possess them in the park.

Camping

Camp in designated campsites only. Sleeping in vehicles outside of campgrounds is not permitted.

Don't Be A Victim!

Burglaries have recently occurred at numerous trailheads and parking areas in the park. Those responsible for the crimes were investigated, arrested by Mount Rainier rangers and National Park Service special agents, and convicted in court. However, these convictions will not necessarily end the problem of car burglaries in the park.

Follow these simple guidelines to avoid becoming a victim of future car break-ins:

- Do not leave any valuables in your vehicle, even for a short time.
- Do not leave bags, packs, or purses, that look like they could contain valuables visible in your vehicle.
- If you must store any personal items in the trunk of your car, do so before you arrive at your destination. You may be being watched at the trailheads and parking lots.
- Immediately report all suspicious activity you observe at or around parking lots or along roads to a park ranger.

Fishing & Boating

A license is not required for fishing, but certain park waters are closed or open to fly fishing only.

Motorized boating is prohibited in the park. Non-motorized boating is permitted on all lakes except Frozen Lake, Reflection Lakes, Ghost Lake, Shadow Lake, and Tipsoo Lake.

NOTICE: Research studies have shown mercury is present in some trout in a few park lakes. Check the Washington Department of Health website <http://www.doh.wa.gov/> for information on fish consumption.

Fires in the Park

Make fires only in a fire grill. Collecting firewood is prohibited. See page twelve for firewood sales in the park.

Pets and Service Animals

Leashed pets are permitted only in picnic areas, campgrounds, and parking lots and on roads currently open to public vehicles. *During hot weather do not leave pets in vehicles.*

Pets must be on leashes no longer than six feet and are not allowed in buildings, on trails, in off-trail or backcountry areas, or on snow.

Service animals individually trained to perform specific tasks are allowed on trails and in park facilities only if they are providing a service for a disabled person. Service dogs-in-training are not service animals under ADA, but are considered pets.

Tree Hazards

Healthy trees with no defects can present a danger under certain conditions. Stay alert for falling limbs and cones on windy days, and avoid forested areas during storms when possible. Sudden gusts can do great damage to trees—as well as anything in range of falling debris.



Grand Park Fire, Summer 2002

Wildland Fire

Fire is an important part of Mount Rainier National Park's ecosystem and is essential if the natural diversity of park forests and meadows are to be maintained for future generations of park enthusiasts.

During your visit you may see smoke from a wildland fire, helicopters, and other firefighting activity. Your safety is a main consideration in the management of park fires. If you see smoke from an unmanaged fire, report the location at the nearest visitor center. If fire conditions become high, the park may implement campfire restrictions.

When a naturally ignited fire is not determined to be a threat to people or structures, it may be managed to benefit the park's ecosystem. Fire on the landscape promotes natural conditions and reduces buildup of dead wood and brush.

Learn more about wildland fire or visit www.firewise.org.

Permits

Permits are required for all overnight stays in the backcountry, and for travelling on glaciers and above 10,000 feet in elevation.

Please Recycle!

Mount Rainier National Park has been recycling since the late 1960s. We recycle aluminum cans, plastic, glass, office paper, mixed paper, cardboard, scrap metal, used oil, batteries, and a number of other items.

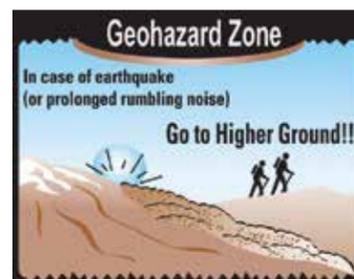
We also purchase recycled plastic products such as plastic bags, picnic tables, and plastic lumber; paper products made of pre- and postconsumer recycled paper; automobile products; and other products.

Be part of the effort! Please deposit aluminum cans, plastic bottles, and glass in the recycle cans provided.

Mount Rainier: An Active Volcano

Active steam vents, periodic earth tremors, and historic eruptions provide evidence that Mount Rainier is sleeping, not dead. Seismic monitoring stations around the mountain should provide days or weeks of advance warning of impending eruptions. Other geologic hazards, however, can occur with little warning. These include debris flows and rockfalls.

The more time you spend in an area with geologic hazards, the greater the chance that you could be involved in an emergency event. While most people consider the danger to be relatively low, you must decide if you will assume the risk of visiting these potentially dangerous locations.



If you are near a river and notice a rapid rise in water level, feel a prolonged shaking of the ground, and/or hear a roaring sound coming from upvalley—often described as the sound made by a fast-moving freight train—move quickly to higher ground! A location 200 feet or more above river level should be safe.

Detailed information is available at park visitor centers or from scientists at the U.S.G.S. Cascades Volcano Observatory, 1300 SE Cardinal Court, Building 10, Suite 100, Vancouver, WA 98661, vulcan.wr.usgs.gov.

Knowledge and Safety: Keys to Great Hiking

With 280 miles of park trails, there are plenty of opportunities to be adventurous, explore, learn, and have fun hiking. Waterfalls, meadows, deep forests, and rugged highcountry await those who properly prepare for their journeys. Here are some important tips for all hikers:

- Talk with rangers about trail conditions, distances, and elevations.
- Carry a topographic map.
- Know the weather forecast, and stay alert for changing conditions.
- Be prepared by carrying the ten essentials.
- Choose appropriate outdoor clothing, footwear and gear.
- Whenever possible do not hike alone.
- Always tell someone of your travel plans so they can notify the park if you fail to return.

Pay Attention To The Weather

At Mount Rainier, the weather can change rapidly. Hikers who aren't prepared increase their risk of becoming lost or injured. Avoid problems: know and plan for Mount Rainier's changeable weather.

Crossing Streams Safely

Many hikers underestimate the power of moving water and some consider their former successful stream crossings a ticket to the other side. This may not be true. Regardless of your knowledge, skills, and experience use these pointers in making wise decisions when crossing a stream.

- Early morning when river levels are generally at their lowest is the best time to cross.
- Look for an area with a smooth bottom and slow moving water below knee height.
- Before crossing, scout downstream for log jams, waterfalls, and other hazards that could trap you. Locate a point where you can exit if you fall in.
- Use a sturdy stick to maintain two points of contact with the ground at all times.
- Unfasten the belt of your pack so you can easily discard it if necessary.
- Staring down at moving water can make you dizzy. Look forward as much as possible.



Steve Redman photo

Wilderness Camping

Wilderness camping permits are required for all overnight stays in the park's backcountry. Permits and backcountry information are available at all wilderness information centers and most visitor centers (see page twelve for locations and hours).

Although permits are free, there is an optional, fee-based reservation system for campers and climbers in effect May through September. Backcountry reservations are \$20 per party (one–12 people) for one to 14 consecutive nights.

Seventy percent of all backcountry sites and zones are available for reservation. Permits for the remaining thirty percent are issued on a first-come, first-served basis, no more than one day in advance of the start of the trip.

Paradise Trail Work

Paradise is one of the most scenic and heavily visited areas of the park. Visitors with many interests—hiking, photography, wildlife viewing, wildflowers, climbing—travel on the network of trails surrounding Paradise throughout the snow-free months. While they are heavily travelled, it's the weather and other environmental conditions that take a toll on these trails located in one of the snowiest places on Earth.



This summer the Nisqually Vista Loop Trail is undergoing much needed repair. The asphalt surface and some of the bridges and culverts are being removed and replaced.

A few tips to avoid having your hike affected by trail work:

- Sections of the Nisqually Vista Trail will be closed weekdays.
- As possible, the trails will be open weekends.
- Watch for the occasional vehicle transporting materials on Paradise area trails.
- Follow detour signs to avoid having to backtrack at closures.
- Stop by the Paradise Jackson Visitor Center to pick up a Paradise area trail map and to check for the latest on closures and detours.

Please stay on trails while hiking in the park. Enjoy your visit to Paradise!

Climbing

Each year, approximately 10,000 people attempt to climb Mount Rainier. Nearly half reach the 14,410-foot summit. Climbing passes and permits are required for travel above 10,000 feet and on glaciers. Climbing information—including fees, routes, and conditions—is available at the Paradise Climbing Information Center and other ranger stations. *Please obtain permits at least 30 minutes prior to ranger stations' closing times (see page 12).* Guided climbs and climbing seminars are available through:

- Alpine Ascents International (206) 378-1927
- International Mountain Guides (360) 569-2609
- Rainier Mountaineering, Inc. (888) 892-5462

Hiking the Muir Snowfield

The Muir Snowfield—a permanent field of ice, snow, and rock outcrops—is located north of Paradise between 7,000 and 10,000 feet in elevation. Thousands of people hike on the Muir Snowfield each year en route to Camp Muir. On a clear day, the hike is spectacular. But when the weather deteriorates, as it often and unpredictably does, crossing the Muir Snowfield can be disastrous.

- Avoid the snowfield in questionable weather, especially if you're alone or unprepared. Weather conditions can change suddenly and drastically.
- If you're ascending and clouds or fog start rolling in, turn around and head back to Paradise. If that's not possible, stop moving, dig in, and wait for better weather.
- Without a compass, map, GPS (and extra batteries), and altimeter, it is extremely difficult to find your way to the trailhead in a whiteout. Carry these items and know how to use them.
- Do not descend on skis or a snowboard in limited visibility—you could become lost.
- When hiking to Camp Muir, be sure to carry emergency bivouac gear so that you can spend the night out if you have to.
- To protect fragile alpine vegetation, hike only on snow or official trails.

While it may be disappointing to abandon your hike to Camp Muir, remember that the snowfield will still be there in better weather.

| Easy & Moderate Hikes | | | | |
|--------------------------------|-------------------------------|---|---------------------|---|
| Area | Trail Name | Trailhead Location | Round-Trip Distance | Comments |
| Carbon River | Rainforest Nature Trail | Carbon River Entrance | 0.3-mile loop trail | Self-guiding trail through an inland temperate rainforest |
| Kautz Creek | Kautz Creek Viewpoint | 3 miles southwest of Longmire | 0.1-mile | Wheelchair-accessible boardwalk and viewpoint |
| Longmire | Twin Firs | 1.9 miles southwest of Longmire | 0.4-mile loop trail | Short hike in old growth forest. Limited parking |
| | Trail of the Shadows | Across from the National Park Inn | 0.7-mile loop trail | Good for children & evening strolls; meadow/mtn. views; east half of loop suitable for wheelchairs with assistance. |
| | Carter Falls | 2 miles northeast of Longmire | 2 miles | Moderate hike, climbs 500' up forested canyon to waterfall |
| Paradise | Nisqually Vista | Lower Paradise parking lot | 1.2-mile loop | Trail work this summer will prohibit hiking the loop in full. |
| | Skyline Trail to Myrtle Falls | Large stairway/ramp near visitor center | 1 mile | Suitable for strollers and wheelchairs (with assistance) |
| Stevens Canyon Road | Bench & Snow Lakes | 1.5 miles east of Reflection Lakes | 2.5 miles | Watch for bears in the meadows in late summer |
| | Box Canyon | 11 miles east of Paradise | 0.5-mile loop | View a deep, narrow canyon and glacially-polished rocks |
| Ohanapecosh | Grove of the Patriarchs | Near Stevens Canyon entrance | 1.2-mile loop | Old growth forest, ancient trees |
| | Silver Falls | Ohanapecosh Campground | 2.4-mile loop | Old growth forest, waterfall, river, suspension foot-bridge |
| Mather Memorial Parkway/SR 410 | Tipsoo Lake | Off SR 410, east of Cayuse Pass | 0.5-mile loop | Short trail around the lake, mountain views |
| Sunrise | Silver Forest/Emmons Vista | South side of parking lot | 2 miles | Glacier views at Emmons Vista Overlooks (0.5 mile one-way) |
| | Nature Trail | North side of parking lot | 1.5 miles | Wildflower meadows and great mountain views |



A beautiful day on the mountain can turn into dangerous whiteout conditions in a matter of minutes. Knowing what to do and making the right decision can be the difference between life and death.

Daniel Keebler photo

Hazards of the Season

Winter snowpack may linger late into summer on the mountain. Snow may be found covering portions of trails well into August. This past winter was unusually warm and dry, creating what will likely be an early hiking season this year. However, keep in mind that snow is not the only issue when it comes to safe backcountry travel. Many trails are likely damaged; bridges and footlogs may be out; and large fallen trees may obscure trails.

Many early season hikers are not prepared for the route-finding challenges encountered by a lingering snowpack. Conditions change rapidly during the day and footprints in the snow quickly disappear. This has left many day hikers disoriented upon their return trip, expecting to simply follow their own tracks back to the snow-free trail. This results in many lost individuals, injuries, and fatalities.

Snow avalanches are common in early summer. The greatest danger to you is an avalanche that you trigger by skiing, snowboarding, snowshoeing, or climbing. Be prepared for travel in avalanche terrain. Carry a transceiver, probe, and shovel and know how to use them. Determine if the location you are traveling is avalanche prone. When in doubt, ask questions or don't go. Unstable snow may slide at any time—not just in winter! Remember, even small avalanches can be deadly.

Be aware that mountain weather changes rapidly. A pleasant outing can quickly be transformed into a survival ordeal. Having proper gear (adequate boots, ice axe, the ten essentials, etc.) is a must. Navigation in storm conditions can be extremely difficult. If you're ascending and clouds or fog start rolling in, turn around and head back to the trailhead. If that's not possible, stop moving, dig in, and wait for better weather.

Also consider the steep snow slopes, melt holes, thinning snow bridges, and other hazards that you may encounter, and be honest with yourself in assessing your skills and experience.

Be prepared for route-finding conditions. Trails may be snow-free at lower elevations but anticipate and prepare for snow at higher elevations. If you plan on retracing your route back to the trailhead consider using wands on snow-covered trails. Always carry a good map and compass, and actively use them on snow-covered trails. Also consider supplementing your map and compass with an external antenna GPS for best coverage beneath a forest canopy. Again, it is extremely important that you know how to use these tools.

Most importantly, plan your route ahead of time, have a backup plan, and never travel alone. When route-finding, note important landmarks. If the trail becomes difficult to follow, stop and find where you are on the map before continuing. If at any point you feel uncomfortable or unprepared, turn around.

If You See a Black Bear or a Mountain Lion

Mount Rainier National Park provides habitat for many animal species. Among the largest and most feared are the black bear and the mountain lion. Though you are not likely to see them, if you do meet one of these larger mammals, your best defenses are awareness and knowledge.

Watch them from a distance. Wildlife tend to have a "personal space" and if you enter that space they may become aggressive. The best way to avoid unwanted encounters is to be alert, and don't attract or surprise them. Watch for evidence of their presence such as scat and tracks. Bears commonly rip up logs for insects, and usually leave lots of scat around. Mountain lions cover their scat by raking dirt with their rear feet. Keep all food and attractants, including trash, securely stored and inaccessible to wildlife. Food conditioning, where animals associate people with food, is one of the leading causes of bears injuring humans.



Close Encounters With Black Bears

Although black bear attacks are extremely rare in the United States and have never occurred in this park, your safety depends mostly on your own actions. If you encounter a black bear, do not run, but back away slowly and leave the

area. A defensive bear will appear agitated and will often give visual and vocal warnings like swatting or stomping the ground, exhaling loudly, huffing, snapping teeth, or lowering the head with ears drawn back while facing you. This response may escalate to a charge. Bears respond to people in different ways—take time to understand the signals. Be aware of aggressive signals and know how to respond to prevent close encounters.

If Charged by a Black Bear

- Stand your ground and do not run.
- If the bear stops, slowly back away while talking, keeping the bear in view while leaving the area.
- If it continues, act aggressively, shouting and throwing rocks or sticks.
- If the bear attacks and you have food, distance yourself from the food.
- If the bear attacks and you do not have food, fight back aggressively. This is likely a predatory attack. The bear is treating you as prey.

Close Encounters With Mountain Lions

Mountain lions (also known as cougars) usually do not like confrontation. If you see one, give it plenty of space so it can get away. Never approach cougar kittens. Leave the area immediately.



- Do not run or turn your back on a lion.
- Gather children with adults. Quickly pick up and hold small children.
- Stand in a group with your companions.
- If the lion moves toward you, wave your arms and make noise. Make yourself look large, intimidating and in control: stand up tall, open your jacket, yell, throw things.
- Back away slowly while facing the animal.
- If attacked, fight back aggressively. Stay standing. Hit as hard as possible especially to the head. Use a stick or rock as a weapon. Throw dirt in the eyes. Protect your head and neck.

Report all bear and mountain lion sightings to a ranger.

Before you step off the trail...

... consider this: each step into a meadow crushes an average of 20 plants!



When exploring Mount Rainier's fragile meadows hike only on maintained trails or thick patches of snow.

Leave No Trace

- Plan ahead and prepare
- Travel and camp on durable surfaces
- Dispose of waste properly
- Leave what you find
- Minimize campfire impacts*
- Respect wildlife
- Be considerate of others

*Fires are for emergency use only; they are not allowed in Mount Rainier's Wilderness

Keep Wildlife Wild

- Please do not feed the wildlife.
- Store your food in an animal-proof container or inside your car.
- Do not leave food, beverages, pet food, or toiletries unattended for any length of time.
- Clean up picnic areas after you eat.



Human food puts animals at risk and some die as a result. For example birds, like jays or ravens are effective nest predators—eating the eggs or young of other birds. By

feeding jays or ravens, visitors concentrate these nest predators near roads and trails and inadvertently contribute to the death of songbirds in the same area.

Feeding wildlife harms them in many ways. Beggar squirrels, foxes, deer, and jays learn to approach people and busy areas. They often get hit and killed by cars. Animals that become accustomed to humans and human food may also pursue and injure visitors. Biologists and rangers must intervene, with killing the animal as the last resort.

Carry the "10 Essentials" and know how to use them!

1. Map and compass
2. Sunglasses, sunscreen, and hat
3. Extra clothing (warm!) and rain gear
4. Flashlight or head lamp (extra batteries)
5. First aid supplies
6. Waterproof matches or lighter
7. Repair kit and tools (for gear)
8. Extra food
9. Extra water
10. Emergency shelter



Historic Roads To Exploring Mount Rainier

Early history suggests that local people found their way to the mountain, descending upon Longmire and Paradise before there were roads. Visitation to the national park—designated as the nation’s fifth national park in 1899—climbed from 1,786 in 1906 to 15,038 four years later presenting an immediate need to construct roads. Today, with six entrances to the park, the roads bring more than 1.7 million visitors from around the world.

These roads are an important contribution to the Mount Rainier National Historic Landmark District. Landmark status is the highest level of recognition for historic resources, and preservation of historic roads.



Nisqually Road

Nisqually to Paradise Road The first route leading into the mountain was a rough trail constructed by James Longmire in 1884. The road ended at the present day Longmire National Historic District and was extended to Paradise as a foot trail.

Today’s road was engineered along much of the same route that Longmire used. It beckons people to visit meadows, waterfalls, and historic buildings. Very early morning or late evening travel along this road will help to avoid parking congestion and road construction. Early risers should watch for wildlife in the meadows below the Paradise Valley Loop Road and along the Trail of the Shadows in Longmire.

Westside Road Along with the Carbon River Road, the Westside Road was part of an early plan to develop a series of connecting roads that would circumnavigate Mount Rainier. It was referred to as the “Around-the-Mountain-Road”. The idea was eventually abandoned when steep terrain and floods continually challenged the efforts along both roads.



John Chao photo

Sunrise from Sourdough Ridge

Only three miles of Westside Road are maintained and open to vehicle traffic. The remainder continues as a hiking and mountain bike trail that crosses creeks and winds through the forest. Both the road and the trail are easy to access any time of day. Along the way, it will become very clear why completing and maintaining the road were considered unattainable.

Carbon River Road Open only to pedestrian and mountain bike traffic. Paralleling the Carbon River, this road is subject to the meandering whims and the fierce dynamic nature of the glacial river.



Carbon River Rainforest

John Chao photo

As one of the few remaining unpaved historic scenic parkways within the National Park Service, the Carbon River Road retained the original historic character of early park roads until 2006. That year the road suffered extreme flood damage thus is now open to vehicles only to the park boundary.

This pedestrian road provides daily access to several visitor destinations, including the Rainforest Nature Loop Trail and the Chenuis Falls picnic area. Due to very limited parking, an early arrival is recommended for more adventurous hikers and wilderness campers.

Mowich Lake Mowich Road branches off from SR165, the same highway used to reach Carbon River. It is unpaved after the first three miles and may be rough. Mowich Lake is the largest and deepest lake in Mount Rainier National Park. It is set in a glacial basin surrounded by fragile

wildflower meadows. Visit any time of day or plan an overnight at the primitive campground (self-registration required).

White River Road to Sunrise The Yakima Park Highway is a 15-mile road in the

northeastern portion of Mount Rainier leading to the highest elevation accessible by motor vehicles. Even though the historic name has given way to being called the White River Road and the Road to Sunrise, the road’s alignment is a reminder of its natural and cultural history.

“Sunrise”: the name is a clue to the most inspiring time of day to visit. The road provides access to White River Campground, the Wonderland

Trail, and a number of backcountry trails. There are views of other significant mountains in the Cascade range, glaciers, crevasses, and subalpine meadows. Here, opportunities for photography, hiking, wildlife, and wildflower viewing are recognized as some of the best in the park.

Cayuse Pass to Tipsoo Lake This is technically part of State Route 410 that runs through the national park. Plan an evening visit to Tipsoo Lake where there are trails, mountain views, abundant wildflowers, huckleberries in season, lakes, and picnic tables.



Martha Falls in Stevens Canyon

Stevens Canyon Road Construction on the last major new road built at Mount Rainier began in the 1930s. It took 24 years to complete the road, due in part to the interruption by World War II. The road was originally built to give park rangers and naturalists on the west side, quicker access to the popular east side destination of Yakima Park, known today as Sunrise.

A natural rock wall on the north aligns with an extensive steep valley to the south. With significant change in elevation the landscape offers canyons, rivers, waterfalls, and lakes. A morning drive from east to west provides unexpected mountain glimpses. Whereas, an afternoon drive west to east, has the mountain in your rearview mirror with a spectacular last look from the Backbone Ridge turnout.

Parking in Paradise



If you are visiting Paradise on a nice day be prepared for heavy traffic, busy parking lots, and pedestrians on the roadway. Due to the popularity of the Paradise area, you are asked to park your vehicle in certain lots depending on the intent of your visit and the type of vehicle you are driving. Please drive courteously and help improve traffic flow by following these guidelines:

- Parking in the upper Paradise lot, adjacent to the Jackson Visitor Center, is intended

for short-term visitors and is limited to two hours. This lot is generally full by 11:00 am. Disabled visitors with a valid disabled parking permit may park in the upper lot with no time restriction; disabled-accessible trailheads are available near the visitor center and the Paradise Inn. Paradise Inn overnight guests may also park in the upper lot during their stay.

Parking can be difficult to find on sunny summer weekends at Paradise, Sunrise, Grove of the Patriarchs, and at trailheads between Longmire and Paradise. To avoid congestion, visit these areas on weekdays, arrive early, and carpool.

- Parking in the lower Paradise lot is intended for visitors staying longer than two hours, for those hiking in the Paradise area, and for backcountry campers and climbers with a valid backcountry

Park roads are winding, road shoulders are narrow, and the speed limit is 35 mph in most areas. Watch for pedestrians, sightseers, bicyclists, and wildlife. Please be courteous and use pullouts to allow faster drivers to pass you safely.

- permit. When the upper Paradise lot is full, short-term visitors may also use the lower lot.
- Additional parking for long-term and overnight visitors is available along the one-way Paradise Valley Road, east of the upper Paradise lot.
- Motorhomes, RVs, and vehicles towing trailers must park along the Paradise Valley Road, east of the upper Paradise lot.
- The Paradise Shuttle is not operating this season due to a lack of funding.



Archaeologist Ben Diaz with a 1920s glass bottle found beneath the road with the "Whistle" logo.

History Buried Beneath the Road

Hidden beneath the lines and the asphalt on the Nisqually to Paradise Road are natural geologic timelines and artifacts. As the old layers of asphalt are removed and areas are trenched, stories of the past are exposed and recorded by archaeologists.

Ben Diaz, park archaeologist, has been on site during the rehabilitation of the Nisqually Road. Diaz commented, "During excavation activities two features contributing to the Longmire Historic District archaeological site were exposed. These include a structure that had been burned, and a trash pit likely associated with the old auto barn circa 1920."

Beneath all the historic findings are rounded rocks from ancient lahars. Diaz has also identified distinct ash layers from a Mount St. Helens eruption 3400 years ago and a layer that originates from Mount Mazama (now called Crater Lake) that erupted 7600 years ago. Surveys yielded eighteen new historic sites. Stone tool artifacts older than the 3400-year-old Mount St. Helens eruption were found in earlier excavations.

One of the historical sites along the current road is the first wagon road. It was built by James Longmire in 1893 and terminated at his Longmire Springs development. Surveys for today's road date to 1903.

Road Work Ahead

Continued from page one



In 2015, power and data lines between Longmire and Paradise are being replaced, which will greatly improve reliability and service. Paving and minor repairs between the Nisqually Entrance and Longmire will also cause minor delays in travel for visitors and staff alike. Delays will be limited to no more than 30 minutes through the entire project. Expect rough road conditions.

Safety guidelines:

- Simply, slow down.
- Avoid passing at any time.
- Blind curves are everywhere limiting your sight distance.
- Driving in the wrong lane to avoid uneven surfaces is dangerous.
- Do not get out of your vehicle when stopped.
- If you pull into a turnout while following a pilot car and all the vehicles in that line have passed, wait for the next pilot car going your direction, otherwise you could find yourself in on-coming traffic or possibly head-on with construction machinery.
- Large machinery and heavy loads use the other lanes. Doing something other than following instructions could put you in grave danger.

Travel Bingo!

| | | | | |
|---------------------|--|--|--------------------------------|--------------------------------|
| B | I | N | G | O |
| Mountain Summit | Gray Jay | Wild flowers | Tree Stump | Flagpole |
| Deer | Trailhead | Waterfall | Arrowhead Sign | Lichen Hanging On a Branch |
| Moss on a Rock | Sapling (Young Tree) | FREE! Construction | Big Tree Wider Than 3ft | Sun |
| Park Ranger | Animal Sound Rabbit Rabbit Tweet Tweet | Steller's Jay | Creek | Pine cone |
| Fern | Glacier | Sign for Mount Rainier National Park | Chipmunk | Bridge |

How long since you last played Travel Bingo? This special edition will keep you on the lookout as you travel around the park. Cross off the items as you find them until you complete a vertical, diagonal, or horizontal row. Go ahead, be an overachiever and find all of the items!

Mount Rainier Places Word Search

| | | | | | | | | | | | | | | | | | | | | | | | | | |
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| O | D | C | A | R | B | O | N | R | I | V | E | R | L | C | A | R | T | E | R | F | A | L | L | S | A |
| H | U | G | O | A | F | C | K | A | E | P | E | L | C | A | N | N | I | P | C | A | T | O | P | S | G |
| S | C | A | U | Q | V | Y | O | M | J | I | B | E | O | G | S | C | O | U | W | T | M | V | K | O | R |
| K | A | E | P | S | E | H | C | A | N | E | E | T | H | F | G | M | M | O | M | S | U | M | R | E | O |
| B | L | E | C | A | J | B | V | I | W | E | S | I | D | A | R | A | P | P | T | P | E | A | T | S | V |
| O | E | W | S | X | E | D | A | C | R | F | V | T | G | B | Y | H | N | U | S | J | M | M | I | K | E |
| X | Y | R | T | Y | H | R | E | F | L | E | C | T | I | O | N | L | A | K | E | S | N | A | M | L | O |
| C | Z | F | V | C | T | D | E | W | S | X | Q | A | Z | M | L | P | N | K | R | O | B | J | C | I | F |
| A | T | W | I | N | F | I | R | S | G | O | C | O | U | G | A | R | R | O | C | K | V | G | H | U | T |
| N | P | O | U | I | R | U | Y | T | R | O | E | R | W | Q | A | S | D | F | A | G | H | J | K | R | H |
| Y | O | O | D | E | O | R | F | V | W | H | I | T | E | R | I | V | E | R | I | V | E | R | L | E | E |
| O | M | P | O | I | G | U | Y | H | J | A | T | S | I | V | A | T | L | A | B | V | B | N | M | V | P |
| N | L | K | J | H | I | G | N | C | D | N | M | K | J | N | I | B | G | T | M | R | F | F | V | I | A |
| T | I | P | S | O | O | L | A | K | E | A | C | P | W | L | A | R | X | S | U | W | E | D | C | R | T |
| R | A | C | U | I | E | R | M | E | I | P | S | G | A | D | H | F | K | U | L | M | C | N | B | Y | R |
| A | E | K | N | I | R | H | A | V | A | E | L | O | D | X | S | A | M | M | O | W | I | C | H | L | I |
| I | P | I | R | G | W | B | S | H | R | C | L | R | G | N | B | R | R | Y | C | F | R | S | S | L | A |
| L | X | N | I | D | G | N | R | B | N | O | A | W | F | E | G | D | I | R | T | R | A | P | M | A | R |
| L | N | L | S | N | K | P | T | T | A | S | F | I | L | O | N | G | M | I | R | E | A | T | N | U | C |
| O | F | R | E | T | R | V | Y | S | C | H | A | C | R | H | C | B | N | V | S | K | D | L | W | Q | H |
| O | C | R | P | T | J | C | Q | A | T | J | D | M | H | N | T | E | S | I | T | W | R | T | R | S | S |
| P | E | R | O | R | M | L | E | R | C | N | A | T | S | L | G | G | R | C | I | N | E | D | S | I | D |
| R | O | J | I | N | N | O | F | A | N | I | R | E | M | M | O | N | S | V | I | S | T | A | S | N | S |
| G | N | K | N | D | I | R | Y | D | R | G | A | L | A | G | U | E | D | E | M | N | B | R | N | O | T |
| C | L | M | T | E | C | T | B | R | L | L | N | O | S | S | K | Y | L | I | N | E | T | R | A | I | L |

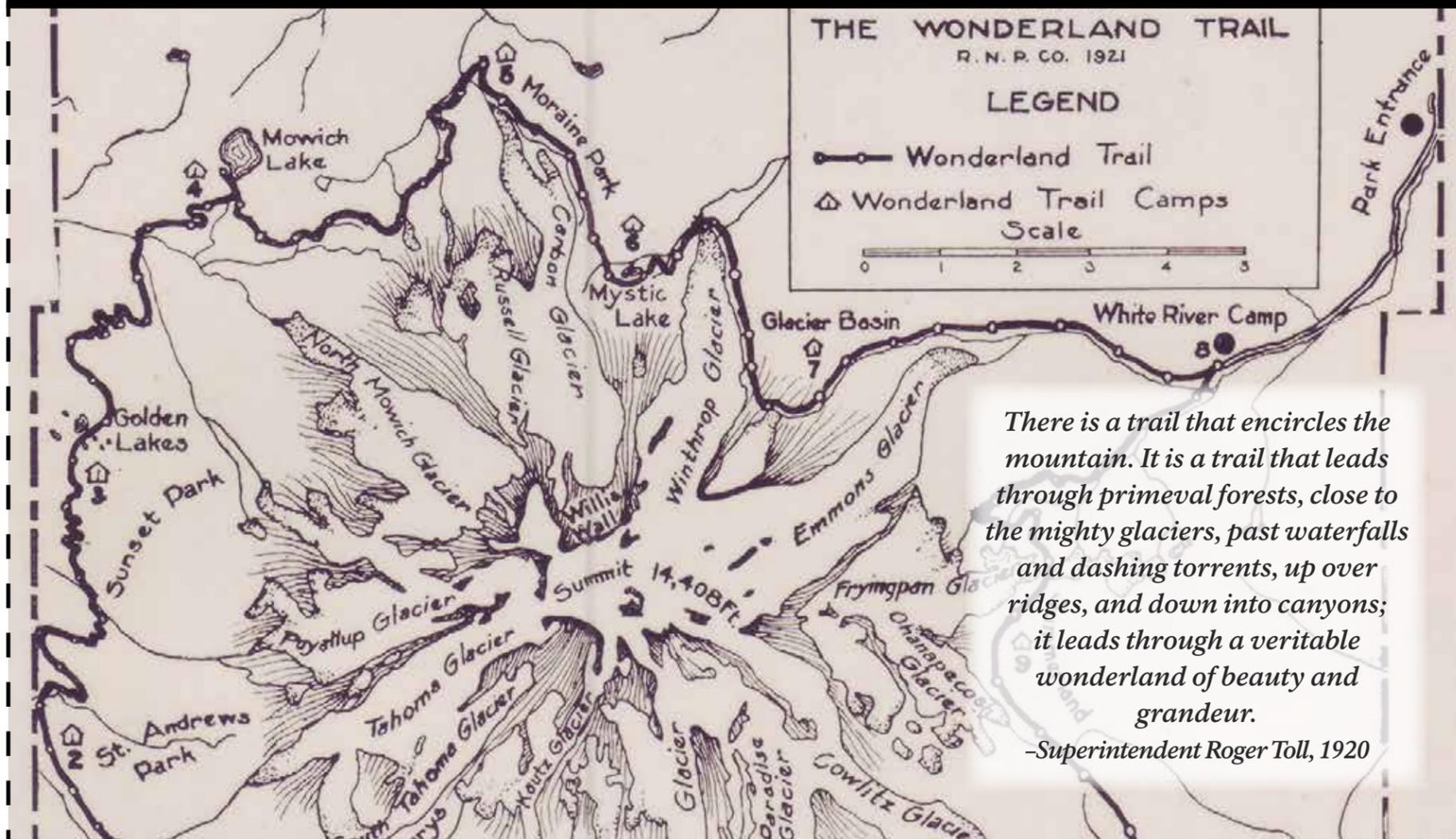
Sharpen your pencil and get ready to search for the names of 27 park places! The answer key is located on page 9. Once you find all the names, see if you can find them on the map provided at the entrance station.

Alta Vista
Box Canyon Trail Loop
Camp Muir
Carbon River
Carter Falls
Columbia Crest
Cougar Rock
Emmons Vista
Grove of the Patriarchs
Jackson Visitor Center

Longmire
Mount Rainier
Mowich
Naches Peak
Narada Falls
Nisqually River
Ohanapecosh
Paradise
Pinnacle Peak
Rampart Ridge

Reflection Lakes
Skyline Trail
Sunrise
Sunrise Point
Tipsoo Lake
Twin Firs
White River

100 Years of the Wonderland Trail 1915 - 2015 (Continued from page one)



Continued from page one



Patrol cabin alongside the trail in Indian Henry's Hunting Grounds, circa 1930s. The park constructed the log cabin in 1915, the same year it completed the original encircling trail. The cabin is still in use today. NPS Archival photo

To make ranger patrols more effective, the park also constructed a series of patrol cabins along the trail, simple log structures where staff could “spend a night or a season without the usual annoyances experienced in abandoned mining cabins.” Built with native logs and cedar-shake roofs, the park supplied them with small cook stoves, dining tables, and sleeping accommodations. The remote cabins served as summer residences, emergency overnight shelters for winter patrols, storehouses for fire-fighting equipment, and temporary shelters for hikers.

In August 1915, the Mountaineers Club of Seattle made the first complete circuit around the mountain on the Wonderland Trail. After a train trip to Ashford, they disembarked, loaded up their supplies, and walked to the park's Nisqually Entrance. Each day thereafter they followed the new Wonderland route, with some club members marching along with military precision while others traveled at their own pace, pausing at times to take photographs or enjoy a tranquil resting place. They camped each night in the wildflower-strewn subalpine parks that ring the mountain above the 5,000 foot level. When the hikers reached camp at the end of their day, the kitchen detail built a large bonfire and set up the commissary. When the kitchen chief blew the whistle to announce dinner, there was a “grand rush of the hungry hordes to get into line.”

The trip gave them three weeks of adventure, physical fitness, and comradeship. Like today's backpackers they saw the changing face of Mount Rainier, which presented dramatically different profiles as they circled the peak. Sometimes the mountain looked “so near and looked so inviting in its beautiful white mantel, one felt tempted to run up to the summit before breakfast just to work up an appetite.” The club repeated the trip several times in the next decade, and the news and publicity generated by those excursions helped establish the trail's popularity. In the 1920s, the park began improving the trail and shortened the overall length to make it more attractive to visitors. Park officials attached the name “Wonderland” in 1920 to better promote the trail as a tourist destination. A 1920 publicity brochure advertised the “new Wonderland Trail” as the “most glorious trip in the world.”



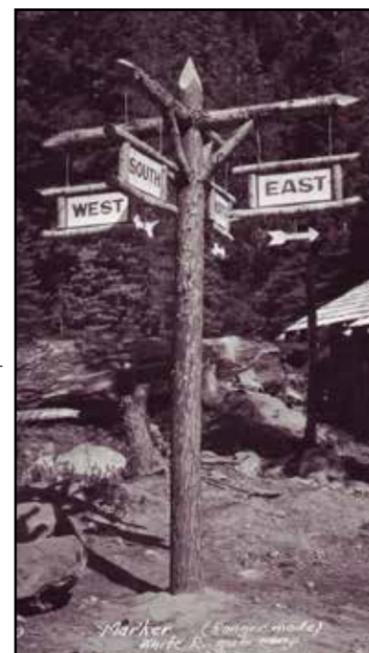
A Civilian Conservation Corps work crew constructs a new section of trail at Mount Rainier. Between 1933 and 1939, young men from the park's CCC camps carried out much of the trail maintenance in the park, including the construction of trails, bridges, and hiker shelters. NPS archival photo.

Along with The Mountaineers, the Boy Scouts were the other organization closely associated with the early history of the Wonderland Trail. Puget Sound-area Scout troops began taking Wonderland trips in the early 1920s. The 100-mile circuit around Rainier was the ideal place for local Scouts to hone their hiking and camping skills and to live out their Scouting ethos. Since the Scouts were a service-oriented organization, their hiking

Above—A map of the Wonderland Trail, from a 1921 Rainier National Park Company publicity brochure. The map shows the location of campsites for the company's saddle and pack horse outings around the mountain. Note that the indicated route crosses directly over the Winthrop Glacier. NPS archival photo

trips often included trail improvement projects, including building some new sections of trail. In August 1925, the Tacoma News Tribune reported that a group of Eagle Scouts from Tacoma, Seattle, Everett, and Bellingham constructed a one-mile section of trail from Longmire up Rampart Ridge. Thereafter, visiting Scout troops regularly engaged in small-scale improvement projects to go with their Wonderland trips.

The challenges of the Boy Scout—and later Girl Scout—outings helped build character, self-reliance, and an appreciation for the outdoor world. The same can be said for the individuals, families, and groups that have walked the Wonderland ever since then. Like the many dedicated hikers who have completed the entire circuit, the Wonderland Trail has come full circle, from a path created to protect the park's natural resources to what is now a cultural resource and popular destination itself.



Wonderland Trail directional marker, erected at the point where the path enters White River Campground, 1928. During the twenties, park rangers installed a variety of travel aides—including trailhead kiosks, mileage markers, and boulder cairns—that made it easier for visitors to follow and enjoy the trail. NPS archival photo

Climate Changes at Mount Rainier?

By Barbara Samora and Rebecca Lofgren, NPS Biologists

This winter's snow pack, or lack thereof, and warmer winter temperatures are causing park staff to take notice of the changing weather patterns here in the Cascades, and consider the impacts of future climate projections. The mountain, along with the rest of the Washington Cascades, experienced unusually warm weather from December through March. Despite near-normal precipitation for the winter season, the warm temperatures caused a disproportionate amount of precipitation to fall as rain instead of snow in the mountains throughout the season.



John Chao photo

Data collected from the Paradise weather station, indicates that accumulated precipitation (both rain and snow) from October 2014 to April 2015 is about 100 percent of normal but the amount of snowfall we received was well below the average of 600 inches. As of May 15, the total snowfall at Paradise was just over 266 inches. Although snowfall is measured from July 1 through June 30, it's looking like this year might be the lowest snowfall recorded at this site in almost 90 years. The current low on record occurred in 1939-1940 with 313 inches of total snowfall recorded. The average maximum snow depth at Paradise for the period of record is about 172 inches, typically measured in early April. Maximum measured snow depth during 2014-2015 at Paradise reached only 85 inches on April 12th.

So what does this mean to the park's ecosystems?

Climate has been changing naturally over the centuries and park ecosystems have evolved as the climate has changed. However, winter and spring temperatures have increased in North America during the last century and this warming has produced changes in hydrology and plants. Studies have found that the warming trend has caused some plants to bloom and leaf out earlier in areas of the West. The timing of spring snowmelt is shifting earlier in the year. Snow extent and depth have decreased in some areas of the West. While there will be many interesting effects from this record breaking low snow year, one of the most obvious is going to be reduced spring and summer flows on our rivers.

Climate warming will have significant effects on park environments, decreasing snow packs and stream flow, and drying soils which in turn affect the plants and animals that inhabit the park. Scientists at the University of Washington have found that, on average, our region has warmed about 1.3 °F from 1895 to 2011. Researchers expect warming to continue as a result of climate change, with climate projections predicting the extraordinary warm winter of 2014-2015 will resemble average conditions in the Cascades by mid-to late century. The increases they have measured in temperature over the West are consistent with the rising atmospheric carbon dioxide levels produced from human sources.

Using Your Photos to Discover How Climate Change is Affecting Wildflowers

By Dr. Janneke Hille Ris Lambers, Elli J. Theobald and Anna Wilson, MeadowWatch, University of Washington



Elli J. Theobald photo

Seasons define our experience at Mount Rainier National Park. In the summer, many people enjoy the wildflowers that bloom in profusion in the meadows, while just a few months earlier up to 20 feet of snow can cover the summer's display. Not surprisingly, the winter wonderland strongly influences wildflowers. Specifically, snow controls when avalanche lilies, lupines, and all flowers blossom. When snow melts earlier, flowers bloom earlier and when snow melts later, flowers bloom later.

This leads to a critical question: as average temperatures increase with climate change, how will the wildflowers so many of us enjoy be affected? This is a difficult question to answer without a lot of information—and you can help! You can contribute to research at the University of Washington by sharing your wildflower photos. Each of your pictures is an 'observation' of when and where wildflowers bloom. Photos contributed this summer will be particularly useful due to the decreased snowpack on Mount Rainier. These data can help uncover how climate change affects the timing of the seasons.

All you need to do is take photos of wildflowers (close enough to identify the species) from anywhere in Mount Rainier National Park! Make sure your photos are date-stamped and geo-tagged (most smartphones automatically enable this feature), and visit www.meadowwatch.org for instructions on how to contribute your photos to our project. You will be helping build a long-term data set used to understand the impacts of climate change in Mount Rainier National Park. Thanks for your help!

Reintroducing Fishers to Native Habitat

Most of Mount Rainier's wildlife is fairly elusive, but you are likely to see deer, marmots, and squirrels during your visit, and maybe even mountain goats if you venture into the backcountry. What's missing here? The Pacific fisher has been missing from its native habitat on Mount Rainier's slopes since the mid-1900s.

The fisher is a small, reclusive predator that thrives in old growth forests. Along with wolves and lynx, fishers were extirpated (eliminated) from Mount Rainier's forests during the past century. Over the next four to six years, Mount Rainier and North Cascades national parks are teaming up with Washington Department of Fish and Wildlife to reintroduce fishers to their historical range in the Cascades.

Returning fishers will restore a critical native predator to a spectacular forest ecosystem.



Connecting Parks, Science, and People

By Dr. Jerry Freilich, North Coast & Cascades Science Learning Network Coordinator

Quietly and discreetly, a great deal of science is done each year in our national parks. The National Park Service monitors ecosystem health and investigates sensitive plants and animals to improve management. Scientists from outside agencies and universities do their own research, using the parks as "controls" to compare with more heavily impacted areas.



The North Coast & Cascades Science Learning Network (SLN) is an organization within the northwest national parks created to encourage research in the parks and to disseminate scientific information. The "Network" serves all eight National Park Service sites in the Pacific Northwest and operates a science information website <http://www.nwparkscience.org>. The SLN website supplements the Service's own sites at each park and features in-depth science information about park resources. The site has two-three page "Resource Briefs" on a diversity of topics and a series of "Science Minute Videos" <http://www.nwparkscience.org/video>. Each video is about four minutes long highlighting both the science work itself and park scientists who do it.

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The SLN serves Mount Rainier, Olympic, North Cascades, and five smaller, historical sites in Washington and Oregon. The SLN also provides funding and support for graduate research and special projects. Please contact the SLN's director, Dr. Jerry Freilich, jerry_freilich@nps.gov, based at Olympic National Park, for additional information.

Word Search Key

Key to the Mount Rainier Places Word Search located on page seven.

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| S | T | R | E | T | N | E | C | R | O | T | I | S | I | V | N | O | S | K | C | A | J | Z |
| A | R | B | O | N | R | I | V | E | R | L | C | A | R | T | E | R | F | A | L | L | S | A |
| O | A | F | C | K | A | E | P | E | L | C | A | N | N | I | P | C | A | T | O | P | S | G |
| U | Q | V | Y | O | M | J | I | B | E | O | G | S | C | O | U | W | T | M | V | K | O | R |
| P | S | E | H | C | A | N | E | E | T | H | F | G | M | M | O | M | S | U | M | R | E | O |
| C | A | J | B | V | I | W | E | S | I | D | A | R | A | P | P | T | P | E | A | T | S | V |
| S | X | E | D | A | C | R | F | V | T | G | B | Y | H | N | U | S | J | M | M | I | K | E |
| T | Y | H | R | E | F | L | E | C | T | I | O | N | L | A | K | E | S | N | A | M | L | O |
| V | C | T | D | E | W | S | X | Q | A | Z | M | L | P | N | K | R | O | B | J | C | I | F |
| I | N | F | I | R | S | G | O | C | O | U | G | A | R | R | O | C | K | V | G | H | U | T |
| U | I | R | U | Y | T | R | O | E | R | W | Q | A | S | D | F | A | G | H | J | K | R | H |
| D | E | O | R | F | V | W | H | I | T | E | R | I | V | E | R | I | V | E | R | L | E | E |
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| S | O | O | L | A | K | E | A | C | P | W | L | A | R | X | S | U | W | E | D | C | R | T |
| U | I | E | R | M | E | I | P | S | G | A | D | H | F | K | U | L | M | C | N | B | Y | R |
| N | I | R | H | A | V | A | E | L | O | D | X | S | A | M | M | O | W | I | C | H | L | I |
| R | G | W | B | S | H | R | C | L | R | G | N | B | R | R | Y | C | F | R | S | S | L | A |
| I | D | G | N | R | B | N | O | A | W | F | E | G | D | I | R | T | R | A | P | M | A | R |
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| P | T | J | C | Q | A | T | J | D | M | H | N | T | E | S | I | T | W | R | T | R | S | S |
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Strengthening Mount Rainier's Volunteer Program

By Laurie B. Ward, Washington's National Park Fund Executive Director



Each year, hundreds of volunteers march into Mount Rainier National Park to help park staff repair trails, clean up campgrounds, and restore precious meadows. They assist with search and rescue, serve as meadow rovers, assist stranded travelers, and help to archive precious documents.

Last year, almost 1,700 volunteers gave thousands of hours of volunteer time to Mount Rainier National Park. Many of these passionate parks people submit their hours to their employers who then support the park on their behalf by giving to Washington's National Park Fund.

And several years ago, a kind and compassionate couple included Washington's National Park Fund in their estate plans. When they passed away, Mount Rainier National Park received \$50,000 a year for the past five years for its volunteer program.

These are a few examples of the benefits Mount Rainier National Park gleans from its partnership with Washington's National Park Fund. Washington's National Park Fund—a 501(c)(3) nonprofit organization—serves as the park's official philanthropic partner. The Fund accepts charitable gifts that are then given to Mount Rainier National Park for projects focusing on these four main areas:

- Funding necessary *Science and Research* on glaciers, rivers, flora, and fauna
- Improving *Visitors' Experiences* by maintaining trails, supporting the park's Search and Rescue program, and improving campgrounds
- Strengthening Mount Rainier's *Volunteerism and Stewardship* activities
- Bringing more *Youth and Families*—many of whom might otherwise never visit—into the park

Whether you help fund volunteerism, include Mount Rainier in your will, buy a national park license plate (in-state residents), or drop a few coins in the donation boxes at Mount Rainier's visitor centers, these sources all add up and have a major impact on this beloved place.

Please consider giving back to Mount Rainier National Park through The Fund. Over the past several years the Fund has given more than \$2.5 million to Mount Rainier, North Cascades, and Olympic National Parks. More information at www.wnspf.org or email fund@wnspf.org.



Love Your Plates!

Support Washington State's national parks by purchasing your national parks license plate today!

The plates are available for your car, truck, trailer, or motorcycle. The parks receive \$28 from each plate renewal. Last year plates generated \$139,000 for these treasured places! More information is available at www.wnspf.org.



Experience Mount Rainier as a Volunteer Ranger

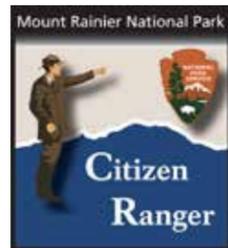
As you visit Mount Rainier, keep your eyes open for people wearing hats, shirts, and jackets with a "volunteer" logo. You'll see volunteers working in the visitor centers and assisting visitors in the meadows. Even more are busy behind the scenes, organizing the park's collection of historic photos and taking care of plants in our greenhouse.

Last year, almost 1,700 people worked in partnership with the National Park Service to protect the natural and cultural resources of Mount Rainier and serve its visitors. These invaluable partners help us accomplish far more than we could have alone.

Have you ever dreamed of being a park ranger? You still can—for a day, for a summer, or on winter weekends as your schedule permits. Opportunities abound. Ask how you can become part of our team!

www.nps.gov/mora/getinvolved/volunteer.htm

Citizen Ranger Learning Adventures!



There is a new way to explore the park! Have your own adventure by completing "Citizen Ranger Quest" activities. Has your inner Junior Ranger never really gone away? Try out a Quest! They are designed for older

children (12 and up) and adults. However, these in-park learning adventures can also be enjoyed by younger children with help from adults or older children. Groups, families, or individuals completing four of the do-it-yourself activities become: "Mount Rainier Citizen Rangers," and receive a certificate and patch.

Quest topics are diverse and vary from history to science to stewardship. Some Quests take place indoors while others help you explore outdoors. Completion times for the different Quests vary from about thirty minutes to two hours. This summer, we are piloting Quests that can be completed using web-based information before you arrive or after you leave the park

For additional information, or to obtain your Citizen Ranger Quest activity sheets and certificates, inquire at the Longmire, Paradise, or Sunrise visitor centers.

Ranger-led Programs

Since the earliest days of the National Park Service, rangers have shared their knowledge through the presentation of interpretive programs—guided walks, talks, and campfire programs for visitors of all ages. This long-standing tradition continues at Mount Rainier.



Today, our interpretive staff consists of rangers, teachers, student interns, and volunteers from a wide array of backgrounds and expertise. Please join us for a variety of free programs, ranging from informal talks at park visitor centers to junior ranger programs for kids to guided hikes, evening campfire programs, and even winter snowshoe walks. Find out who else has come to Mount Rainier and why. Discover what this mountain really is and what it may become. Meet some other users of the park's resources—from owls to elk—and learn why they are here. Topics vary daily, and may include geology, wildlife, ecology, mountaineering, or park history.

— One Night Only —



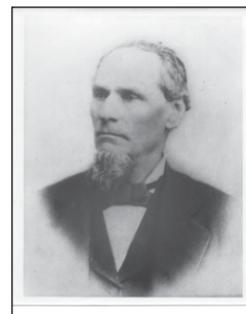
Shadows of the Past

Saturday, August 22

Living History Lantern Tour

Meet the people who explored, settled, climbed, and protected Mount Rainier more than 100 years ago. Historical characters emerge from the darkness along the Trail of the Shadows as you walk the trail with a ranger.

The free lantern tours begin in front of the National Park Inn at Longmire, rain or shine, and depart every 20 minutes from 8:30 pm until 9:30 pm.



Tours last 90 minutes. Bring a flashlight and a warm jacket. Wear sturdy shoes.

Park Partners

Who's responsible for protecting Mount Rainier National Park? Everyone! Here are some groups that deserve special thanks.



Mount Rainier National Park Volunteers
www.nps.gov/mora/getinvolved/volunteer.htm



Discover Your Northwest
www.discovernw.org



Washington's National Park Fund
www.wnspf.org



Mount Rainier National Park Associates
www.mrnpa.org



Student Conservation Association
www.thesca.org



Washington Trails Association
www.wta.org

Ranger-led Programs

| Paradise | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
|--|--------------------------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|---|---|
| Paradise Ranger Chat Plan your day with a knowledgeable ranger. Look for the ranger in the lobby of the Paradise Inn. | 25 min | 9:30 am | 9:30 am | | 9:30 am | 9:30 am | 9:30 am | 9:30 am |
| Subalpine Saunter Discover the ecology of the Paradise area. Meet the ranger at the flagpole in front of the visitor center. 60-75 minutes with the ranger. Return time on your own. | 60-75 min 1 mile round-trip | 10:30 am | 10:30 am | 10:30 am | 10:30 am | 10:30 am | 10:30 am | 10:30 am |
| A Mountain in Motion Explore how Mount Rainier has changed over the centuries. Meet at the large flagpole outside of the visitor center. 60-75 minutes with the ranger. Return time on your own | 60 - 75 min 1.5 miles round-trip | 2:00 pm | 2:00 pm | 2:00 pm | 2:00 pm | 2:00 pm | 2:00 pm | 2:00 pm |
| Junior Ranger Program Join a ranger or volunteer for fun and educational activities to earn your Junior Ranger Patch! Ages six to 11, parents must remain with their Junior Rangers. Meet inside the visitor center at the front desk. | 30-45 min | 1:00 pm | 1:00 pm | 1:00 pm | 1:00 pm | 1:00 pm | 1:00 pm | 1:00 pm |
| Paradise Inn Lobby Talk Join a ranger to discover fascinating stories of Paradise and the historic Paradise Inn. Look for the ranger inside the Paradise Inn. | 30 min | 2:30 pm | 2:30 pm | | 2:30 pm | 2:30 pm | 2:30 pm | 2:30 pm |
| Astronomy Program Observe the heavens from the slopes of Mount Rainier. Check for start times at the visitor center or call the astronomy hotline at (360) 569-6230. | 2 hours | 9:45-11:45 pm weather permitting | 9:45-11:45 pm weather permitting | 9:45-11:45 pm weather permitting | 9:45-11:45 pm weather permitting | 9:45-11:45 pm weather permitting | 9:45-11:45 pm weather permitting | 9:45-11:45 pm weather permitting |
| Paradise Inn Evening Program Take a seat in the lobby of the Paradise Inn and enjoy an evening presentation with a park ranger or one of the guest speakers. Topics vary. Inquire at the Jackson Visitor Center or at the Paradise Inn front desk for program descriptions. | 45 min | 8:45 pm | 8:45 pm | 8:45 pm | 8:45 pm | 8:45 pm | 8:45 pm | 8:45 pm |
| Special Programs Check at bulletin boards, visitor centers, or inns for a schedule. | | | | | | | | |
| Longmire/Cougar Rock Campground | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
| Junior Ranger Program Ages 6 to 11. Join a ranger or volunteer for fun and educational activities! Meet at the Cougar Rock Campground Amphitheater. Parking at the Cougar Rock Campground is limited. If you attend the program but are not camping, please park in the Cougar Rock Picnic Area across the park road from the campground. | 30-45 min | 6:30 pm | 6:30 pm | 6:30 pm | 6:30 pm | 6:30 pm | 6:30 pm | 6:30 pm |
| Evening Program Join a ranger or volunteer for a program that involves, inspires, and explores! Topics vary nightly. Meet at the Cougar Rock Campground Amphitheater. Parking at the Cougar Rock Campground is limited. If you attend the program, but are not camping, please park in the Cougar Rock Picnic Area across the park road from the campground. | 45 min | 8:30 pm | 8:30 pm | 8:30 pm | 8:30 pm | 8:30 pm | 8:30 pm | 8:30 pm |
| Take a HIKE! With a Ranger Experience the forest along the Paradise River en route to Carter Falls. Meet at the Carter Falls Trailhead 2.1 miles east of Longmire, just east of the Cougar Rock Campground. Bring water, a hat, and sturdy shoes. | 2 hrs, return on your own 2 miles | 10:00 am | | | | | | 10:00 am |
| Sunrise/White River Campground | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
| Junior Ranger Program Children ages 6 to 11 are invited to join park staff for a fun activity about the mountain, glaciers, habitats, and more. Meet at the White River Campfire Circle. | 1 hour | 10:00 am | | | | | 10:00 am | 10:00 am |
| Sunrise Afternoon Guided Walks Learn about the natural and cultural history of the Sunrise area on this easy ramble with a ranger. Meet at the Sunrise Visitor Center flagpole. The trail is not wheelchair accessible. | 45 min | 1:00 & 3:00 pm | 1:00 & 3:00 pm | 1:00 & 3:00 pm | 1:00 & 3:00 pm | 1:00 & 3:00 pm | 1:00 & 3:00 pm | 1:00 & 3:00 pm |
| Evening Program Take an in-depth look at a special topic of Mount Rainier National Park during a traditional campfire talk. Meet at the campfire circle in the White River Campground. | 45 - 60 min | | 7:30 pm | | 7:30 pm | | 7:30 pm | 7:30 pm |
| Check bulletin boards for additional Junior Ranger programs, special programs, and schedule updates. | | | | | | | | |
| Ohanapecosh | Length | SUN | MON | TUE | WED | THU | FRI | SAT |
| Junior Ranger Program Ages 6 to 11. Join a ranger or volunteer for fun and educational activities! Meet at the Ohanapecosh Visitor Center. | 1 hour | 10:00 am | | 10:00 am | 10:00 am | 10:00 am | 10:00 am | 10:00 am |
| Evening Program Join a ranger or volunteer for a program that involves, inspires, and explores! Topics vary nightly. Meet at the Ohanapecosh Campground Amphitheater. | 45 min | | | 9:00 pm through 7/25 8:00 pm through 9/6 | | | 9:00 pm through 7/25 8:00 pm through 9/6 | 9:00 pm through 7/25 8:00 pm through 9/6 |
| Check bulletin boards for additional Junior Ranger programs, special programs, and schedule updates. | | | | | | | | |

Visitor Facility Hours

Visitor Centers

| | | |
|---|--|--|
| Longmire Museum (360) 569-6575 | July 1 - October 12 9:00 am - 5:00 pm daily | Ranger programs, exhibits, information, books |
| Paradise Henry M. Jackson Visitor Center (360) 569-6571 | July 1 - September 7 10:00 am - 7:00 pm daily September 8 - 14 10:00 am - 6:00 pm daily September 15 - October 12 10:00 am - 5:00 pm daily | <i>Due to road construction delays the visitor center may open up to 15 minutes late.</i> Ranger programs, exhibits, information, park film, books, food service, gifts |
| Ohanapecosh Visitor Center (360) 569-6581 | June 26 - September 7 9:00 am - 11:00 am Friday - Sunday 3:00 pm - 5:00 pm Tuesday - Sunday | Ranger programs, exhibits, information, books |
| Sunrise Visitor Center (360) 663-2425 | June 27 - September 20 10:00 am - 6:00 pm daily | Exhibits, information, books |

Wilderness & Climbing Information Centers

| | | |
|---|---|---|
| Longmire Wilderness Information Center (360) 569-6650 | July 1 - October 12 7:30 am - 5:00 pm daily | Wilderness camping & climbing permits, general information |
| Paradise Climbing Information Center (Guide House) (360) 569-6641 | July 1 - September 7 7:00 am - 4:30 pm daily <i>Closed 12:00 pm - 12:30 pm daily</i> | Wilderness camping and climbing permits, exhibits, general information |
| White River Wilderness Information Center (360) 569-6670 | July 1 - October 12 7:30 am - 5:00 pm daily | Wilderness camping and eastside climbing permits, general information |
| *Carbon River Ranger Station (360) 829-9639 | July 1 - September 7 8:30 am - 5:00 pm Monday - Thursday 7:30 am - 6:00 pm Friday - Sunday <i>*Located on the Carbon River Road 5.5 miles east of the Mowich Lake (SR165) junction.</i> | Wilderness camping & northside climbing permits, general information (including Ipsut Creek Campground) |

Food & Lodging

For in-park lodging reservations, call Mount Rainier Guest Services at (360) 569-2275 or go to www.mtrainierguestservices.com

| | | |
|---|---|--|
| National Park Inn at Longmire | Open year-round Front Desk: 7:00 am - 10:00 pm daily | Lodging, dining room |
| Longmire General Store Open year-round | July 1 - September 6 9:00 am - 8:00 pm daily September 7 - December 10:00 am - 5:00 pm daily | Gifts, snacks, apparel, firewood |
| Paradise Inn | Front Desk: open 24 hours daily Dining Room hours: Breakfast 7:00 am - 9:30 am Lunch 12:00 pm - 2:00 pm Dinner 5:30 pm - 8:00 pm Sunday Brunch 11:30 am - 2:00 pm Cafe hours: 9:00 am - 10:00 pm | Lodging, dining, gifts, apparel, ranger on duty, interpretive programs |
| Paradise Camp Deli and Gift Shop in the Jackson Visitor Center at Paradise | July 1 - September 7 10:00 am - 6:45 pm daily | Food, gifts, books, apparel |
| Sunrise Day Lodge Snack Bar and Gift Shop | June 27 - August 30 10:00 am - 7:00 pm daily | Food and gifts. Day use only, no overnight lodging |
| Firewood Sales | Available through September 27 at the Longmire General Store and through September 6 at Cougar Rock Campground. | |

Gasoline, lodging, dining, recreation equipment rentals, and other services are available in local communities. A list of these services is available at park visitor centers and on the park's website at www.nps.gov/mora. Religious services are available in local communities.
GAS IS NOT AVAILABLE IN THE PARK

Maximum Entrance Arch and Tunnel Vehicle Heights

| Location | Clearance |
|---|-----------|
| Nisqually Entrance | 15.80 ft |
| Northeast Entrance (SR 410) | 15.30 ft |
| Chinook Pass Entrance Arch (SR 410) | 15.20 ft |
| Southeast Entrance (SR 123) | 15.35 ft |
| SR 123 Tunnel | 14.50 ft |
| Tunnel at Box Canyon (Stevens Canyon Road) | 12.60 ft |
| Tunnel West of Box Canyon (MP 7 on Stevens Canyon Road) | 12.60 ft |

Firewood: Buy It Where You Burn It!

Washington forests are in jeopardy from the transportation of invasive insects and diseases in firewood. New infestations of tree-killing insects and diseases often are first found in campgrounds and parks. Here's what you can do to help:



- Buy firewood near where you will burn it—that means the wood was likely cut within 50 miles of where you'll have your fire.
- Wood that looks clean and healthy can still have tiny insect eggs, or microscopic fungi spores, that will start a new and deadly infestation. Always leave it at home, even if you think the firewood looks fine.
- Aged or seasoned wood is still not safe. Just because it is dry doesn't mean that bugs can't crawl onto it!
- Tell your friends not to bring wood with them. Everyone needs to know that they should not move firewood.

More information is available online at www.dontmovefirewood.org.

Wise Water Use

Mount Rainier and Washington State are experiencing drought conditions as a result of a record low winter snowpack.

You can help park water supplies last by conserving water during your visit.

Make every drop count!

Drive-in Campgrounds

| Campground | Open Dates | Elev. | Sites | Fees | Group Fee | Group Sites | Toilets | Dump Station | Maximum RV/Trailer Length |
|--------------|--|--------|-------|------|-----------|-------------|---------|--------------|---------------------------|
| Cougar Rock* | May 22 - Oct. 12 | 3,180' | 173 | \$20 | \$60 | 5 | Flush | Yes | RV 35'/Trailer 27' |
| Ohanapecosh* | May 22 - Oct. 12 | 1,914' | 188 | \$20 | \$60 | 2 | Flush | Yes | RV 32'/Trailer 27' |
| White River | June 26 - Sept. 28 | 4,232' | 112 | \$20 | -- | 0 | Flush | No | RV 27'/Trailer 18' |
| Mowich Lake | Primitive walk-in campground, tents only. 10 sites, 3 group sites (max. group size 12). No fee (must self-register at campground kiosk). Chemical toilets, <i>no potable water</i> . No fires allowed. Elevation 4,929'; generally open July through early October, depending on road and weather conditions. Call 360-829-9639 for information. | | | | | | | | |

***Advance reservations are recommended for individual sites at Cougar Rock and Ohanapecosh Campgrounds from June 25 through the night of September 6. These can be made up to six months in advance. Reservations for group sites are recommended and are available throughout the season. These can be made up to one year in advance. To make a reservation online, go to www.recreation.gov or call 877-444-6777.**